

Abstract of Disclosure

An apparatus of phase-frequency detector for adjusting wobble clock signal and wobble signal in the same phase, comprising: a first logic gate, receiving a first protection signal and a second protection signal and outputting a third protection signal according to a logic operation; a first flip-flop, coupled to the first logic gate, outputting the third protection signal as a first output signal when the wobble clock trigger; a second flip-flop, coupled to the first logic gate, outputting the third protection signal as a second output signal when the wobble signal trigger; a second logic gate, coupled to the first and the second flip-flop, outputting a fourth protection signal according to a logic operation; a third logic gate, coupled to the second logic gate, receiving the third and the fourth protection signal, and outputting a fifth protection signal according to a logic operation; and a control signal generator, receiving the wobble clock, the input signal, and the fifth protection signal and determining whether adjusting the phase of the wobble signal and the wobble clock according to the logic level of the fifth protection signal.

Figures